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A. BEHNA

3,460,535

SANITARY SLIP

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Fig:1

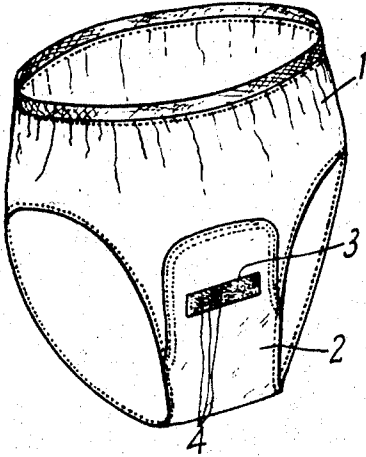


Fig:5

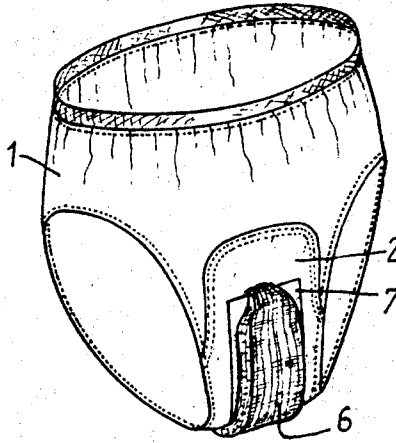


Fig:3

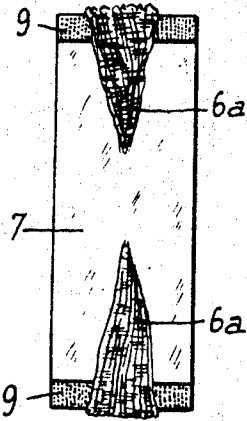


Fig:2

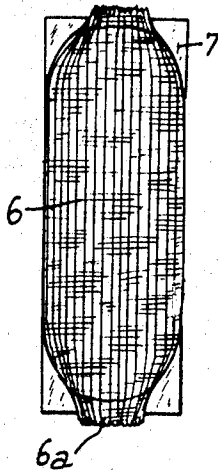


Fig:4

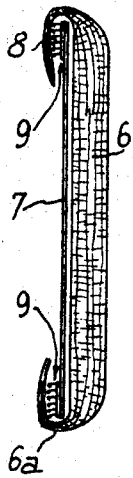


Fig:6

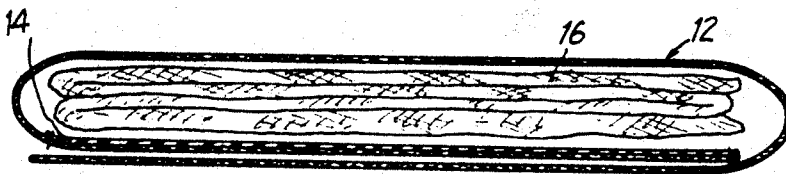
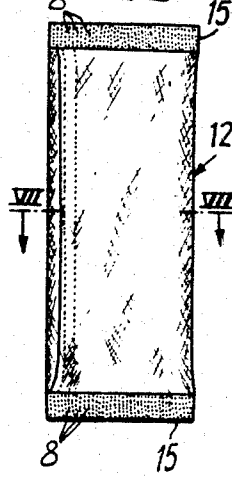


Fig:7

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**SANITARY SLIP**

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6 Claims

**ABSTRACT OF THE DISCLOSURE**

A sanitary slip assembly is formed of a slip made of an elastic material having a gusset portion containing an impermeable lining and having fiber interengaging means located at the ends of the gusset. A flexible support including an impermeable liner has fiber interengaging means arranged for attachment to the similar means on the gusset portion. A member formed of absorbent material, such as a sanitary napkin is secured to the flexible support and is positively held in position within the slip.

This invention has for its object a sanitary slip constituted by the combination of a slip and a flexible support which is designed to retain either a disposable lining of absorbent material or a washable absorbent lining such as a sanitary napkin, the said flexible support being fitted with detachable fastening elements which are designed and arranged to permit attachment to corresponding fastening elements of the slip.

A sanitary slip of this type, while being of very simple design, makes it possible to employ either disposable napkins or washable napkins and also permits the use of washable napkins without requiring any belt, straps or pins. This is an advantage which was hitherto the exclusive property of the disposable napkin or pad.

The invention is also concerned with embodiments which comprise at least one of the following characteristic features:

**Summary of the invention**

(a) The slip is made of elastic fabric, especially elastic fabric which has not been subjected to previous texturation. This fabric can be made of all textiles whether natural, artificial or synthetic and its elasticity makes it possible to reduce to 4 instead of 8 the number of sizes which are usually employed.

(b) The slip is lined, at least in the gusset zone, with a thin sheet of impermeable material such as plastic.

(c) The flexible support is of elongated shape and its detachable fastening elements are located at both ends only.

(d) The detachable fastening elements of the flexible support and the corresponding fastening elements of the slip comprise filament hooks and looped threads.

(e) The flexible support is formed of a single piece of material of rectangular shape and preferably impermeable.

(f) The flexible support is constituted by an envelope.

(g) The envelope is constituted by a piece of washable fabric of rectangular shape which is folded lengthwise in three and sewn at both ends.

(h) The internal face of the innermost fold of the envelope is lined with a sheet of impermeable material.

The invention is also concerned, by way of novel industrial products, with the slips or panties which are fitted with detachable fastening elements as hereinabove defined, as well as the lining supports of absorbent material as hereinabove defined.

A better understanding of the invention will be gained

from a perusal of the following description and from a study of the accompanying drawings in which one embodiment of a sanitary slip in accordance with the invention is shown by way of example and not in any limiting sense and in which:

FIG. 1 is a view in perspective of the slip which is assumed to have been turned inside out.

FIG. 2 is a front view of the assembly which is constituted by the flexible support and a disposable sanitary napkin which is fastened onto the said support.

FIG. 3 is a view looking on the reverse side of the assembly which is shown in FIG. 2.

FIG. 4 is a profile view of the assembly which is shown in FIGS. 2 and 3.

FIG. 5 shows the assembly of FIGS. 2 to 4 which is mounted on the slip of FIG. 1.

FIG. 6 is a front view of a pouch which is lined with a washable napkin, and

FIG. 7 is an expanded sectional view taken along the line VII—VII of FIG. 6.

The sanitary slip which is illustrated in FIG. 1 is composed of the slip 1 proper which is preferably made of elastic fabric and at least the gusset of which is lined with an impermeable elastic sheet 2. The front face and rear face of the slip are each fitted with an element for detachably fastening a lining. In the example under consideration, the said fastening element consists of a small horizontal band 3, for example of plastic material, which is fitted with looped threads 4. In FIG. 1, there is shown only one of these fastening elements, for example the one which is located on the front face of the slip, whilst the other fastening element which is disposed on the rear face is not visible but is identical with the fastening element 3.

In FIGS. 2 to 4, there can be seen a disposable sanitary napkin 6 which is laid flat on a flexible support 7 consisting in the example shown of a thin sheet of plastic material; the napkin 6 is surrounded by a sheath 6a of net fabric in accordance with a conventional structure and the two ends of the said sheath are folded back against the reverse side of the flexible support 7 over the filament hooks 8 of two hooking elements 9 which constitute detachable fastening elements and cooperate with the fastening elements 3 of the slip, the distance between the two elements 9 on the flexible support 7 being equal to the distance between the two elements 3 on the slip. The ends of the net fabric sheath are therefore hooked onto the two elements 9 and the napkin is therefore already fixed on the flexible support 7.

In order to fasten the flexible support 7 which is fitted with the disposable napkin 6, it is merely necessary to place the said support inside the slip 1 by applying its two detachable hooking elements 9 against the corresponding fastening elements of the slip (as shown in FIG. 5) in such a manner that the filament hooks 8 engage within the loops 4. The impermeable sheet 7 protects the slip against soiling and the detachable assembly can very readily be removed for subsequent disposal of the used napkin.

FIG. 6 shows an envelope 12 of soft and spongy fabric consisting, for example, of a piece of material of rectangular shape which is folded lengthwise in three (as also shown in FIG. 7). The internal face of the inner fold is lined with an impermeable sheet 14 which is formed, for example, of plastic material. Both ends 15 of the envelope 12 are sewn and the envelope has two detachable fastening elements, one at each end, which are identical with the two detachable fastening elements 9 of the flexible support 7 of FIGS. 2 to 4 and are consequently provided in the same manner as these latter with filament hooks. The length of the envelope 12 is equal to the length of the flexible support 7 so that the

envelope 12 can be detachably fitted in the slip 1 in the same manner as the lined flexible support 7.

Any suitable absorbent material or substance is placed within the envelope 12. In the example which has been shown in the drawings, there has been placed therein a napkin 16 which was previously folded in four.

In the example also, the impermeable sheet 14 protects the slip against any soiling and the envelope 12 can conveniently be removed for the purpose of washing this latter and also for the purpose of washing the napkin enclosed therein. Should it be desired, it would also be possible to pack the envelope 12 with any type of disposable padding.

In both cases, double protection is afforded by virtue of the fact that provision is made for two impermeable elements which are located one above the other after fitting either of the two forms of padding or lining.

By way of padding or lining material, there can be placed inside the envelope 12 at least one group of two or three juxtaposed bands or cables of textile fibres as they are obtained from the spinnerets and in which there have been formed a few transverse cuts by means of a pair of scissors of the so-called "American" type in such a manner that a portion of the fibres retains the entire length of the article, whilst the other fibres are cut into a number of lengths, thereby preventing the formation of large balls which would otherwise be liable to obstruct the sanitary appliances in which they are placed.

As will be readily understood, the invention is not limited to the embodiment which is described with reference to the accompanying drawings and it is apparent that a large number of modifications could be contemplated without thereby departing either from the scope or the spirit of the invention. It accordingly follows, for example, that the detachable fastening elements comprising filament hooks and looped threads could be replaced by any detachable fastening elements of suitable design.

I claim:

1. A sanitary slip assembly comprising, in combination, a slip made of an elastic fabric having an inner surface and an outer surface, said slip having a front part, a back part, and an elongated gusset part being joined at its ends to said front part and back part, a thin sheet of impermeable material lining the inner surface of said gusset section, a first fastening element being secured to the lined surface of said gusset part near each end thereof, said first fastening elements comprising a narrow band of material having fiber interengaging means extending transversely to the longitudinal direction of said gusset part, an elongated flexible support being adapted to fit on the lined surface of said gusset section and including a layer of impermeable material being arranged adjacent the lined surface of said gusset part, a second fastening element being secured to said flexible support on the surface thereof facing the lined surface of said gusset section near each end thereof, said second fastening elements comprising a narrow band of material having fiber interengaging means extending transversely to the longitudinal direction of said flexible support, said second fastening elements being arranged to interengage in interlocking relationship with said first fastening ele-

ments, and an elongated lining of absorbent material being adapted to be supported by said flexible support on the opposite surface of said impermeable lining in said flexible support from the lined gusset part.

2. A sanitary slip assembly as set forth in claim 1, wherein said lining of absorbent material comprises a sanitary napkin having a tab-like section extending longitudinally from each of its opposite ends, said tab-like sections being adapted to fold over the ends of said flexible support and to be positively locked in place between said first and second fastening elements at the opposite ends of said flexible support and gusset part.

3. A sanitary slip assembly, as set forth in claim 1, wherein said flexible support comprises a soft spongy fabric folded to form an envelope, said impermeable liner in said flexible support being located adjacent the surface of said gusset part, said lining of absorbent material being disposed within said envelope and being disposed between said impermeable liner and an outer fold of said envelope, the opposite ends of said envelope being secured together, and said second fastening elements disposed on the ends of said envelope and being arranged to face toward the lined surface of said gusset part.

4. A sanitary slip assembly, as set forth in claim 3, wherein said envelope is formed by folding a longitudinally extending strip of material into three layers with an enveloping space formed between two of said layers, said lining of absorbent material being positioned within the enveloping space between two of said layers, and said impermeable liner in said envelope being positioned on the face of the layer contacting the surface of said absorbent material and being adjacent the lined surface of said gusset part.

5. A sanitary slip assembly, as set forth in claim 1, wherein said envelope is formed by folding a longitudinally a first one of said elements being formed of a plastic material fitted with looped threads, and the other one of said fastening elements being formed of a strip of material having filament hooks extending therefrom whereby when placed in interengaging relationship said hooks on one of said fastening elements interlocks within said looped threads on the other said fastening element.

6. A sanitary slip assembly, as set forth in claim 1, wherein the elastic fabric of said slip has not been subjected to previous texturation.

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